

REMARKS

Claims 1-20 remain in the case. Claims 19-20 are newly added. Reexamination is respectfully requested.

Claims 16-18 are amended to correctly depend from independent Claim 15 and further limit the method step of switching colors.

Claims 1-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara et al. ("Shinohara", U.S. Patent No. 6,231,200) in view of Abileah ("Abileah", U.S. Patent No. 6,111,622). Applicants respectfully traverse.

Regarding Claims 1, 6, 7, 11, and 15, Applicant respectfully submits that Shinohara combined with Abileah does not teach the claimed filter disposed between the array of light emitting diodes (14,15) and the light pipes 16 as in the present invention (Application Figure 1 elements 17a and 17b and page 5 line 29 to page 6 line 2). The filters in the present invention are intended to filter out infra-red light only from the light emitting diodes (LEDs) to enable reading the display while using night-vision equipment (Application page 6 lines 2-9). The illumination from the linear LED arrays (14, 15) is applied to the edges of the light pipes 16 perpendicular to the LCD, while the illumination from the day backlight assembly 11 is applied to a face of the light pipes parallel to the LCD. The different sources of illumination do not interfere with each other. Illumination from the day backlight assembly 11 is used only without the night vision equipment and does not require infra-red filters. Infra-red filtering of the day backlight would be undesirable as it would at least partially inhibit the broad spectrum of illumination provided by the day backlight assembly 11, even if additional measures are taken to mitigate this effect. Hence, it is not desirable to further attenuate the brightness or limit the range of frequencies emitted by the day backlight assembly 11 by placing the infra-red filters over the day backlight assembly.

Conversely, the infra-red filter disclosed in Abileah is mounted across the entire plane parallel to the surface of the light source in one embodiment to filter all light emitted to illuminate the liquid crystal display (Abileah Figure 5 and col. 13 ll. 48-52). Abileah teaches an embodiment where the order of the daytime light source and the electroluminescent (EL) source are reversed (Abileah Figure 6 and col 15 ll. 36-46). However, this embodiment then attenuates the light from the EL source passing through the daytime fluorescent serpentine

lamp tubes 300. Essentially, while the Shinohara and Abileah references disclose similar elements, the elements are arranged differently to avoid interference between the different sources of illumination.

The color filters taught in Shinohara are the red, green and blue filters superimposed over the addressed liquid crystal (Shinohara col. 20 ll. 15-29). Under each color filter is an addressable liquid crystal light valve. A full color display is achieved by selectively addressing each of these light valves to create a full color spectrum. These color filters are related to the proper function of the LCD unit itself, and are not night vision filters.

The "red color coordinate integrity" taught in Abileah refers to distortion caused by a change in viewing angle (Abileah col. 19 ll. 64-65) and does not relate to filtering of infra-red light.

Regarding Claims 2- 4 and 8-18 neither Shinohara nor Abileah teach selectively powering different color LEDs to adapt to the changing needs of a user based on the variable type of night vision equipment that may be used (Shinohara Figure 16).

Regarding Claim 5, the present invention discloses a second linear LED array in a plane parallel to and from an edge opposite of the first linear LED array for additional illumination of the LCD. This second array has the same distinguishing properties of the first array, and neither Shinohara nor Abileah disclose such a complementary structure with these properties.

The present invention teaches a different structure, a different function and a different result. Applicants respectfully request that this rejection be withdrawn.

The other references of record have been reviewed in this case and do not teach the present invention either individually or in any combination.

Conclusion

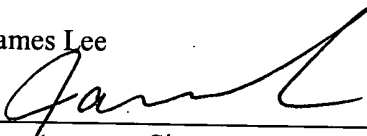
In view of above amendments and remarks, it is respectfully submitted that all the claims are in condition for allowance, and such action is earnestly solicited.

If the Examiner believes an interview would be helpful to advance this case, he is invited to contact the undersigned attorney.

Respectfully submitted, .


I hereby certify that this document and fee is being deposited on May 7, 2003 with the U.S. Postal Service as first class mail under 37 C.F.R. §1.8 and is addressed to the Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria VA 22313-1450.

By: James Lee



Signature

Date of Signature: May 7, 2003



Albin H. Gess
Registration No. 25,726
SNELL & WILMER L.L.P.
1920 Main Street
Suite 1200
Irvine CA 92614
Telephone: 949/253-2720